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2014 Oklahoma Research Day

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05. Geography

University of Central Oklahoma

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Abstracts from the 2014 Oklahoma Research Day

Held at the University of Central Oklahoma

04. Liberal Arts

05. Geography

04.05.01 Landscape-level Mapping of Eastern Redcedar Encroachment at the Selman Living Laboratory

Brad, Watkins , Gloria Caddell, Shey Ramsey

University of Central Oklahoma

Understanding the dynamics of plant communities within the context of landscape is fundamental for the development of better management strategies for environmental protection. The majority of the mixed-grass prairie ecosystem of North America has been lost because of human activities including fire suppression, and much of the rest is currently threatened by invasion of eastern redcedar (*Juniperus virginiana* L.). We are in the fourth year of a study to understand the rate of encroachment and the conditions under which eastern redcedar can become established in mixed-grass prairies at its western limit in Oklahoma. For the eastern redcedar population in the cells mapped at the Selman Living Laboratory, we will report density, cover, population size structure, minimum reproductive size, and sex ratio. We will also describe the distribution of eastern redcedar at the site in relation to environmental factors, including ground slope, aspect, and surrounding ground cover. We have mapped eleven of the thirteen one-hectare cells from our study site for a total of 201 trees, 97 saplings and 239 seedlings.

04.05.02 The Economic and Cultural Impacts of Tornadoes in Oklahoma: A Case Study of Moore

Keana, Dixon

University of Central Oklahoma

The purpose of this project is to understand the impact tornadoes have had on Moore because, unfortunately, it is often hit. Because Oklahoma is prone to tornadoes, it is important for cities to have a recovery plan so that they can recover in a timely manner. Sadly, tornadoes also hit neighborhoods. This can impact people culturally. Why do people stay in areas they know are prone to disasters? This question is addressed in my project. Articles provided as sources for information on: severity of the tornadoes, recovery programs and sponsors, and life in tornado prone areas. Speaking with first responders, recovery program leaders, Moore city emergency management employees, and Moore city officials will also be attempted. This project will focus on one neighborhood in Moore in order to see how people will respond after a tornado has devastated the area. Results have shown, response time is improving and people are learning what it takes for a quick recovery. Importantly, leaders are working on bettering prevention and preparedness. Even though the area is dangerous people tend to stay because it's their home. In the neighborhood this project has focused on, many of the damaged houses are being rebuilt.

04.05.03 Maps or GPS: Can you find your way during an emergency?

Toni, Trim

Northeastern State University

The purpose of this study to determine if there introduction of commercial use GPS is harming the current generation of children's ability to find their way around their local surroundings in case of an emergency. Since the introduction of GPS use for the public in 1995, the general population has become dependent on their GPS device, whether it be a cell phone or their in car dashboard screen. People are becoming extremely dependent on this technology and it is destroying the current generation's ability to navigate their own town of residency without special assistance from Siri™ or Sprint's Navigation App. This research has had personal experience of seeing a person program an address in their GPS and it was literally two blocks down the same street. This study looks at the ability of adults 18-64 years of age to pin point fixed places on a paper map. The participate was asked to fill out a quick questionnaire and place a mark on a map where the following were located: hospital, QuikTrip, police station, and fire station. The map covered the Tulsa metro area and Broken Arrow. The findings of this study concluded that men had the advantage over women when reading a paper map and pin pointing fixed locations.